usual type.

G) This model is to serve as a model for stronger apparatus, (to be used by the same institute). The apparatus described here had already been in operation for one year when this paper was written, and more than 500 experiments had been carried out with it, which proves its serviceability.

The apparatus K 300 consists of the following principal parts: γ-radiation source, container, operation chamber, concrete block, charging mechanism, control desk. The apparatus is mounted in a cabin (area 9 m^2, height 3 m) the walls of which are of sheet iron.

Carrying out work with the apparatus described: The object to be irradiated is introduced into the apparatus by means of one of the charging devices, on which occasion the γ-radiation source is in the closed container. All further operations (opening of the container, placing the container with the radiation source under the operating chamber and transferring the source from the container into the operating chamber) can be carried out only by means of remote control while the cabin door is closed, because of a blocking mechanism.

There follows a short description of the principal parts of the apparatus, with which it is possible to irradiate various objects with a volume of from 30 to 800 cm^3 for 120 to 30 Roentgen per second.

INSTITUTION:

PHASE I BOOK EXPLOITATION SOV/1297

Vsesoyuznaya nauchno-tekhnicheskaya konferentsiya po primeneniyu radioaktivnykh i stabil'nykh izotopov i izlucheniy v narodnom khozyaystve i nauke, Moscow, 1957

Polucheniye izotopov. Moshchnyye gamma-ustanovki. Radiometriya i dozimetriya; trudy konferentsii.... (Isotope Production. High-energy Gamma-Radiation Facilities. Radiometry and Dosimetry; Transactions of the All-Union Conference on the Use of Radioactive and Stable Isotopes and Radiation in the National Economy and Science) Moscow, Izd-vo AN SSSR, 1958. 293 p. 5,000 copies printed.

Sponsoring Agency: Akademiya nauk SSSR; Glavnoye upravleniye po ispol'zovaniyu atomnoy energii SSSR.

Editorial Board: Prolov, Yu.S. (Resp. Ed.), Zhavoronkov, N.M. (Deputy Resp. Ed.), Aglintsev, K.K., Alekseyev, B.A., Bochkarev, V.V., Leshchinskiy, M.I., Malkov, T.P., Sinitsyn, V.I., and Popova, G.L. (Secretary); Tech. Ed.: Novichkov, M.D.

PURPOSE: This collection is published for scientists, technologists, persons engaged in medicine or medical research, and others concerned with the production and/or use of radioactive and stable isotopes and radiation.

COVERAGE: Thirty-eight reports are included in this collection under three main subject divisions: 1) production of isotopes 2) high-energy gamma-radiation facilities, and 3) radiometry and dosimetry.

TABLE OF CONTENTS:

PART I. PRODUCTION OF ISOTOPES

Prolov, Yu.S., V.V. Bochkarev, and Ye.Ye. Kulish. Development of Isotope Production in the Soviet Union 5
This report is a general survey of production methods, apparatus, raw materials, applications, investigations and future prospects for radio isotopes in the Soviet Union.

Card 2/12

Evger, A. Kh., V.A. Belynskiy, V.L. Karpov, S.D. Prokudin and V.S. Ostroumov. Facility for Radiation-Chemical Research Employing Co^{60} Gamma-Radiation Source With an Activity of 21,000 g-ev of Radium 182
A 2-20000 Co^{60} gamma-radiation source, cited as the most powerful in the world according to available data, is described and basic parameters tabulated. The unit is provided with a control panel and a system of periodic observation and is capable of 1200 r/sec dosage per 0.4 litera and ~100 r/sec per 100 liters volume. Working chamber capacity is ~300 liters. The source, comprising 56 standard Co^{60} preparations, the authors state, is safe for attending personnel owing to a "dry" method especially developed for this unit.

Card 8/12

PROKUDIN, S D.

In collection of articles--
Effect of Ionizing Radiation (~~Cont.~~) on Inorganic ~~and~~ and Organic Systems, Moscow, Izd-vo, AN SSSR, 1958, 416pp (most works a continuation of Sb rabot po radiat khim, 1955)

carbon atoms in them, decrease in the rate of radiation destruction of polymethylmethacrylate and its analogs with increase in the size of side groups, intensification of the destruction process in the presence of low molecular weight plasticizers. The fissure formation is interpreted as having an adsorption-type mechanism. The process of radiochemical conversion of plexiglass is regarded as irreversible. There are 8 figures, and 27 references of which 11 are Soviet, 14 English, and 2 French.

PART 5. EXPERIMENTAL METHODS

Breger, A.Kh., Belynskiy, V.A., Karpov, V.L., Prokudin, S.D. Equipment for Radiochemical Research. Part 2. Equipment Supplying Doses of up to 300 Roentgen/Sec in 30 ml and up to 100 Roentgen/Sec in 1 Liter, From a Co^{60} γ-Radiation Source With an Activity of 1400 Radium Gram-Equivalent 380

The first part of this paper gives general considerations on the features of units with Co^{60} γ-radiation sources used in radiochemical research. Further, details are given on the new unit K-1400 (improved K-300) which supplies doses of 300 roentgen/sec in 30 ml and 100 roentgen/sec in 1 liter using three standard Co^{60}

Card ~~29/31~~
1/2

Prokudin, S. D.

sources with a total activity of 1440 radium Gram-equiv. A method was developed for safe, "dry" assembling of powerful sources from smaller standard cobalt charges. The K-2400 proved itself efficient safe during one year of operation, There are 6 figures, 22 ref., 9 Sov. and 13 English.

3/2

30V/81-59-21-74[illegible]

Translation from: Referativnyy zhurnal, Khimiya, 1959, Nr 21, p 158 (USSR)

AUTHORS: Breger, A.Kh., Belynskiy, V.A., Karpov, V.L., Prokudin, S.D.

TITLE: Installations for Radiochemical Investigations. 19 Comm. II. An Installation Ensuring a Dose Intensity of up to 300 Roentgen/sec in a Volume of 30 ml and of up to 100 Roentgen/sec in 1 l With a Co^{60} γ-Radiation Source With an Intensity of 1,400 g-equ Radium

PERIODICAL: V sb.: Deystviye ioniziruyushchikh izlucheniy na neorgan. i organ. sistemy. Moscow, AS USSR, 1958, pp 379 - 394

ABSTRACT: This is a review of installations for irradiation with the γ-radiation of Co^{60} in radiochemical investigations as well as a description of the K—1400 installation of the Physical-Chemical Institute imeni Karpov with a Co^{60} γ-radiation source with an intensity of 1,440 g-equ Ra ensuring a dose intensity of 300 roentgen/sec in a volume of 30 ml and 100 roentgen/sec in 1 l. The installation has been developed based on the requirements of the modern radiochemical experiment; it is equipped

Card 1/2

SOV/81-59-21-74749

Installations for Radiochemical Investigations. Comm. II. An Installation Ensuring a Dose Intensity of up to 300 Roentgen/sec in a Volume of 30 ml and ofup to 100 Roentgen/sec in 1 l With a Co^{60} γ-Radiation Source With an Intensity of 1,400 g-equ Radium

with a desk for remote control and observation of the conditions of the experiment and the processes taking place in the objects of investigation during irradiation. There are 22 references. Communication I see RZhKhim, 1957, Nr 12, 41580.

Z. Sokolova

Card 2/2

BREGER, A.Kh.; Prinimali uchastiye: KARPOV, V.L., kand.khim.nauk; BELYNSKIY, V.A.; OSIPOV, V.B., PROKUDIN, S.D.; TYURIKOV, G.S., kand.khim.nauk; GOL'DIN, V.A.; RYABUKHIN, Yu.S.; KOROLEV, G.N.; AFONIN, V.P.; POKROVSKIY, V.S.; KULAKOV, S.I.; LEKAREV, P.V.; FEDOROVA, T.P.; KOROTKOVA, M.A.; KHARLAMOV, M.T.; NIKOLENKO, G.D.; LOPUKHIN, A.F.; YEVDOKUNIN, T.F.; KASATKIN, V.M.; RATOV, A.V.

Nuclear radiation sources for radiational-chemical studies. Probl.fiz.khim. no.1:61-72 '58. (MIRA 15:11)

1. Nauchno-issledovatel'skiy fiziko-khimicheskiy institut im. Karpova.

(Radiochemistry) (Radioisotopes)

PROKUDIN, V.A.

Mobile mechanized mortar distributors. Suggested by V.A. Prokudin. Rats.i izobr.predl.v stroi. no.8:97-99 '58. (MIRA 13:3)

1. Glavnyy mekhanik stroitel'nogo uchastka odnogo iz trestov Zhilstroya.
(Mortar--Transportation)

PROKUDIN, V.A., mekhanik

Device for preventing the rupture of mortar-pump hoses. Suggested by V.A.Prokudin. Rats.i izobr.predl.v stroi. no.16:72-73 '60. (MIRA 13:9)

1. Trest Leninogorskvinetsstroy.
(Pumping machinery)

PROKUDIN, V.A.; KOCHETKOVA, N.A., red.; SVESHNIKOV, A.A., tekhn. red.

[Memory devices of electronic digital computers] Zapominaiushchie ustroistva elektronnykh tsifrovykh vychislitel'nykh mashin. Moskva, "Sovetskoe radio," 1961. 126 p. (MIRA 14:10)
(Electronic digital computers)

SHEYNDLIN, A. Ye. (Moskva); GUBAREV, A. V. (Moskva); KOVBASYUK, V. I. (Moskva); PROKUDIN, V. A. (Moskva)

Problem concerning the optimization of the operation of magnetohydrodynamic generators. Izv. AN SSSR. Otd. tekh. nauk. Energ. i avtom. no.6:34-38 N-D '62. (MIRA 16:1)

(Magnetohydrodynamics)

KOVBASYUK, V. I.; MEDIN, S. A.; PROKUDIN, V. A.; STEPANOV, S. A.

"Some Aspects of Noble Gases MHD-Generator Operation."

paper submitted for Intl Symp on Magnetohydrodynamic Electrical Power Generation, Paris, 6-10 Jul 64.

Moscow High Temperature Inst

L 11943-66 EWT(1)/EWP(m)/EWA(d)/T-2/FCS(k)/EWA(m)-2/EWA(1) LJP(c) AT
ACC NR: AP6001917 UR/0294/65/003/006/0924.0926

AUTHOR: Medin, S.A.; Prokudin, V.A.

ORG: High Temperature Research Institute (Nauchno-issledovatel'skiy institut vysokikh temperatur)

TITLE: The quasi one-dimensional flow problem in a Hall magnetohydrodynamic generator

SOURCE: Teplofizika vysokikh temperatur, v.3, no.6, 1965, 924-926

TOPIC TAGS: magnetohydrodynamics, plasma generator, Hall effect, Faraday effect, flow analysis

ABSTRACT: At large Hall numbers in a magnetohydrodynamic generator it is necessary to use a special scheme for connecting the electrical load. In the general case, flow in a Hall generator differs from flow in a Faraday-type sectioned generator, not only in electrodynamics but also in hydrodynamics. The presence of a transverse component of the electrical force in the channel can lead to a strong sideways drawing-in of the flow and to distortion of the line of the current. For this reason, generally speaking it is necessary to consider the two-dimensional problem in an investigation of the movement of the carrier gas in the flat channel of a Hall magnetohydrodynamic generator. However, solution of

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UDC: 621.313.12:538.4

L 11943-66

ACC NR: AP6001917

this problem is extremely difficult, and it is therefore of interest to consider an approximate investigation of the flow. The remainder of the article consists of a theoretical and mathematical demonstration that, in a majority of practically important cases, that is to say, at high Hall numbers, the problem can be reduced to the one-dimensional case. Orig. art. has: 20 formulas and 2 figures.

SUB CODE: 20/ SUBM DATE: 27Aug65/ ORIG REF: 003/ OTH REF: 000

Card 2/2

L 62688-65

ACCESSION NR: AP5019103 UR/0286/65/000/012/0123/0123

AUTHORS: Gnamm, A. I.; Kozhayev, A. V.; Prokudin, V. F.

TITLE: Insulating compressed oxygen respirator. Class 61, No. 172196

SOURCE: Byulleten' izobreteniy i tovarnykh znakov, no. 12, 1965, 123

TOPIC TAGS: respirator, compressed gas, oxygen, breathing apparatus, cooling, manometer

ABSTRACT: This Author Certificate presents an insulating compressed oxygen respirator consisting of a mouthpiece with a breathing valve, breathing hoses, a regenerating cartridge, an oxygen tank with a valve, a manometer, an oxygen feed-

Card 1/3

L 62688-65

ACCESSION NR: AP5019103

ASSOCIATION: none

SUBMITTED: 25Dec63 ENCL: 01 SUB CODE: LS,IE

NO REF SOV: 000 OTHER: 000

Card 2/3

L 62688-65

ACCESSION NR: AP5019103

ENCLOSURE: 01

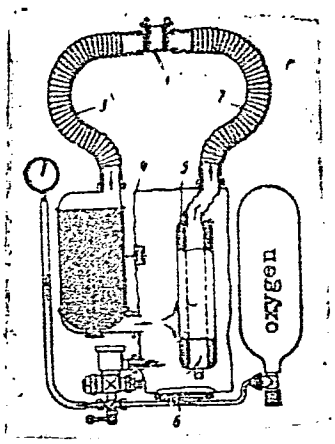

Fig. 1.

1- mouthpiece; 2- inhaling hose; 3- exhaling hose; 4- breathing bag; 5- cooling unit; 6- threaded throat with a valve

Card 3/3

ANTONOV, G.I.; DOLGINA, G.Z.; MINKOVICH, B.D.; PROKUDIN, V.Yu.

Stabilized dolomite brick in the checkerwork of an open hearth furnace. Ogneupory 30 no.9:21-25 '65. (MIRA 18:9)

1. Ukrainskiy nauchno-issledovatel'skiy institut ogneuporov.

BARBARICH, A.I.[Barbarych, A.I.], kand. biol. nauk; BRADIS,Ye.M., doktor biol. nauk; VISYULINA, O.D., doktor biol. nauk; VOLODCHENKO, V.S.; DOBROCHAYEVA, D.M., kand. biol. nauk; KARNAUKH, Ye.D.; KATINA, Z.F., kand. biol. nauk; KOTOV, M.I., doktor biol. nauk; KUZNETSOVA, G.O.[Kuznetsova, H.O.], kand. biol. nauk; OLYANITSKOVA, L.G.[Olianits'ka, L.H.]; OMEL'CHUK, T.Ya., kand. biol. nauk; POYARKOVA, O.M.; PROKUDIN, Yu.M., doktor biol. nauk; PROTOPOPOVA, V.V.; SLYUSARENKO, L.N.; SMOLKO, S.S.; KHRZHANOVSKIY, V.G. [Khrzhanovs'kyi, V.H.], doktor biol. nauk; ZEROV, D.K. akademik, otv. red., ONISHCHENKO, L.I., red.

[Key for the identification of plants in the Ukraine] Vyznachnyk roslyn Ukrainy. Vyd.2., vypr. i dop. Kyiv, Urozhai, 1965. 876 p. (MIRA 18:9)

1. Akademiya nauk URSR, Kiev. Instytut botaniky. 2. AN Ukr.SSR (for Zerov). 3. Moskovskaya sel'skokhozyaystvennaya akademiya im. K.A.Timiryazeva (for Khrzhanovskiy).

PROKUDIN, Yu. N.

PROKUDIN, Yu.N.; SAMOKHVALOV, G.K., redaktor.

[The eminent 19th century Russian botanist V.M.Cherniaev] Vydaiushchiisia russkii botanik XIX stoletiia V.M.Cherniaev. Khar'kov, Izd-vo Khar'kovskogo universiteta im. A.M. Gor'kogo, 1953. 50 p. (MLRA 7:8)
(Cherniaev, Vasilii Matveevich, 1793-1871)

PROKUDIN, Yu.M.

Cereals of the Ukrainian S.S.R. and their utilization in grassland farming. Bot.zhur. [Ukr.] 10 no.4:16-23 '53. (MLRA 6:12)

1. Kharkivs'kiy dershavniy universitet, kafedra vishchikh roslin. (Ukraine--Grasses) (Grasses--Ukraine)

PROKUDIN, Yu.M.

V.M.Cherniaev (160th anniversary of his birth). Bot.zhur. [Ukr.] 10 no.4:86-90 '53. (MLRA 6:12)

(Cherniaev, Vasilii Matveevich, 1793-1871)

PROKUDIN, Yu.N.

New species of quaking grass in the U.S.S.R. Bot.mat.Gerb. no.16:41-44 '54. (MIRA 8:9)
(Quaking grass)

PROKUDIN, Yu.N.

Junceae Nevski series in wheat grass systematics. Bot. mat.Gerb. no.16:59-64 '54. (MLRA 8:9)
(Wheat grass)

L 55339-65 EWT(m)/T/EWP(t)/EWP(b) LJP(c) JD/JG/GS

ACCESSION-NR: AT5015389 UR/0000/65/000/000/0103/0109
542.65:546.654+546.661+546.631:546.723:54-36

AUTHOR: Grebenshchikova, V. I.; Prokudina, A. F.

18
B+1

TITLE: Mechanism of trapping of La, Eu, and Sc by ferric hydroxide

SOURCE: AN SSSR. Otdeleniye obshchey i tekhnicheskoy khimii. Soosazhdeniye i adsorbtsiya radioaktivnykh elementov (Coprecipitation and adsorption of radioactive elements). Moscow, Izd-vo Nauka, 1965, 103-109

TOPIC TAGS: rare earth, adsorption, ferric hydroxide, isotope concentration, ion exchange, ion trapping

ABSTRACT: The adsorption of La, Eu, Sc, and their radioactive isotopes La^{140}, Eu^{152}, and Sc^{46} on aged ferric hydroxide $Fe(OH)_3$ was studied. The mechanism of adsorption of these elements, which have a tendency to hydrolyze, is determined by the hydrogen ion concentration in the solution. For all three elements, there are pH values for which the dependence of the adsorption on the amount of the solid phase is linear. Deviations from linearity take place in pH regions where an appreciable hydrolysis of the elements begins; at such pH values, the adsorption is irreversible in character. It is suggested that the maxima on the curves of percent adsorption vs. pH are due to the presence in the solution

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ACCESSION NR: AT5015389

O

of hydrolyzed ions of the type $R(OH)_2^+$, which readily interact with the hydroxyl groups of the surface molecules of the adsorbent (R being the rare earth element). The drop in adsorption with increasing concentration of hydroxyl ions in the solution may be due either to the formation of nondissociated molecules $R(OH)_3$, which interact much more weakly with the surface of $Fe(OH)_3$ than do the hydrolyzed species of the type $R(OH)^{2+}$ and $R(OH)_2^+$, or to the formation of $R(R(OH)_2)_n^{(3+n)+}$, assuming that a certain quantity of polymers of the type $R(R(OH)_2)_n^{(3+n)+}$ is formed in the solution prior to the formation of the neutral molecules. The formation of radiocolloids may also be one of the reasons for the decline in adsorption. Orig. art. has: 9 figures and 5 tables.

ASSOCIATION: None

SUBMITTED: 29Jul63 ENCL: 00 SUB CODE: IC, GC

NO REF SOV: 011 OTHER: 004

Card 2/2

PROKUDINA, F.V., kand.sel'skokhozyaystvennykh nauk; AZIYEV, K.G., kand.-sel'skokhozyaystvennykh nauk

Controlling wireworms in corn fields. Zashch. rast. ot vred. i bol. 7 no.3:28-29 Mr '62. (MIRA 15:11)

1. Sibirskiy nauchno-issledovatel'skiy institut sel'skogo khozyaystva.
(Omsk Province—Corn (Maize)--Diseases and pests)
(Omsk Province---Wireworms)

PROKUDINA, F. V., Cand of Agric Sci — (diss) "The Use of Herbicides 2.4 D and 2M-4Kh for the Control of Pests in Areas Seeded With Corn, Flax, and Panic Grass," Omsk, 1959, 15 pp (Omsk Agricultural Institute im S. M. Kirov) (KL, 4-60, 122)

. PROKUDINA, G.

: [illegible]
: Weeds and Weed Control

: [illegible], No. 14, 1958, No. 63647

: [illegible], [illegible], Prokudina, G.
: [illegible] Institute of Agriculture
: Chemical Method of Weed Control in Corn Cultivation.

: [illegible], 1957, No. 7, [illegible]

: In 1956, experiments on the application of [illegible] to weeding of corn were conducted at the [illegible] Institute of Agriculture. The soil was light [illegible], 2 days before the appearance of the sprouts, herbicide was applied in the dose of 3.28 kilograms/ha of the active substance. The corn variety was [illegible] 76. During the summer, two inter-row cultivations in two directions were carried out on the control and the test plots. Herbicide cleared the field of annual weeds for three weeks. The yield of the silage mass with the cobs was much higher than on

Card: 1/3

10

[illegible] : USSR N

[illegible] : [illegible] Weed Control

[illegible] : [illegible]

[illegible] :

[illegible] :

[illegible] :

[illegible] :

[illegible] : [illegible] control. The [illegible] results were obtained with the [illegible] variety. On heavier soil, [illegible] was applied one day before the appearance of the sprouts in the dose of 1.[illegible] kilograms/ha (to [illegible]00 liters/ha of the solution). Contamination was lowered to [illegible]. Spraying of [illegible] with [illegible]M-4 K in the dose of 0.[illegible] kilogram/ha was [illegible] in the period of its vegetation from the phase of [illegible] [illegible] to the phase of 8-9 leaves. Early maturing varieties, [illegible] and [illegible], lowered the yield because of spraying but the late maturing ones - [illegible]

: [illegible]

: [illegible] and [illegible] Control N

[illegible] : [illegible], No.M. 1958, No. 65687

:

:

:

[illegible] :

[illegible] : [illegible] and VIR-42 increased the yield of [illegible].
Leaf curl, deformation of the roots near the root collars, temporary brittleness of the leaves were observed in corn after treatment. -- I.D. [illegible]tonov

[illegible] 3/3

PROKUDINA, L.A.

List of literature on the fauna and flora of the Black Sea region near the Karadag Biological Station. Trudy Karad.biol.sta. no.12: 128-134 '52. (MLRA 9:9)
(BIBLIOGRAPHY--BLACK SEA--MARINE BIOLOGY)

PROKUDINA, L.A.

Catalog of the fauna and flora of the Black Sea region near the Karadag Biological Station. Trudy Karad.biol.sta. no.12:116-127 '52. (MLRA 9:9)

(BLACK SEA--MARINE BIOLOGY)

P.[illegible], [illegible]

21435 PIGUKVSKIY, [illegible] ; I P.[illegible]DILA, [illegible]

[illegible] issledovaniyu stroyeniya [illegible].
Doklady Akad. nauk SSSR, Novaya seriya, T. L[illegible]II, No. 2, 194[illegible],
s. 283 - 86 Bibliogr: 10 NAZV.

SO: Letopis' Zhurnal'nykh Statey, No. 29, Moskva, 1949

PROKUDINA, N. L.

23001 Sintez monookisi mirtsena. Doklady akad. Nauk sssr, novaya seriya, T. LXVII, No. 3, 1949, C. 511-12

SO: LETOPIS' NO. 31, 1949

PROKUDINA, M. L.

"A Study of the Structure of Myrcene," Dok. AN, 67, No. 2, 1949;

"Synthesis of Myrcene Monoxide," So: No.3, 1949.

PROKUDINA, N., L.,

USSR/Chemistry - Synthesis
Myrcene

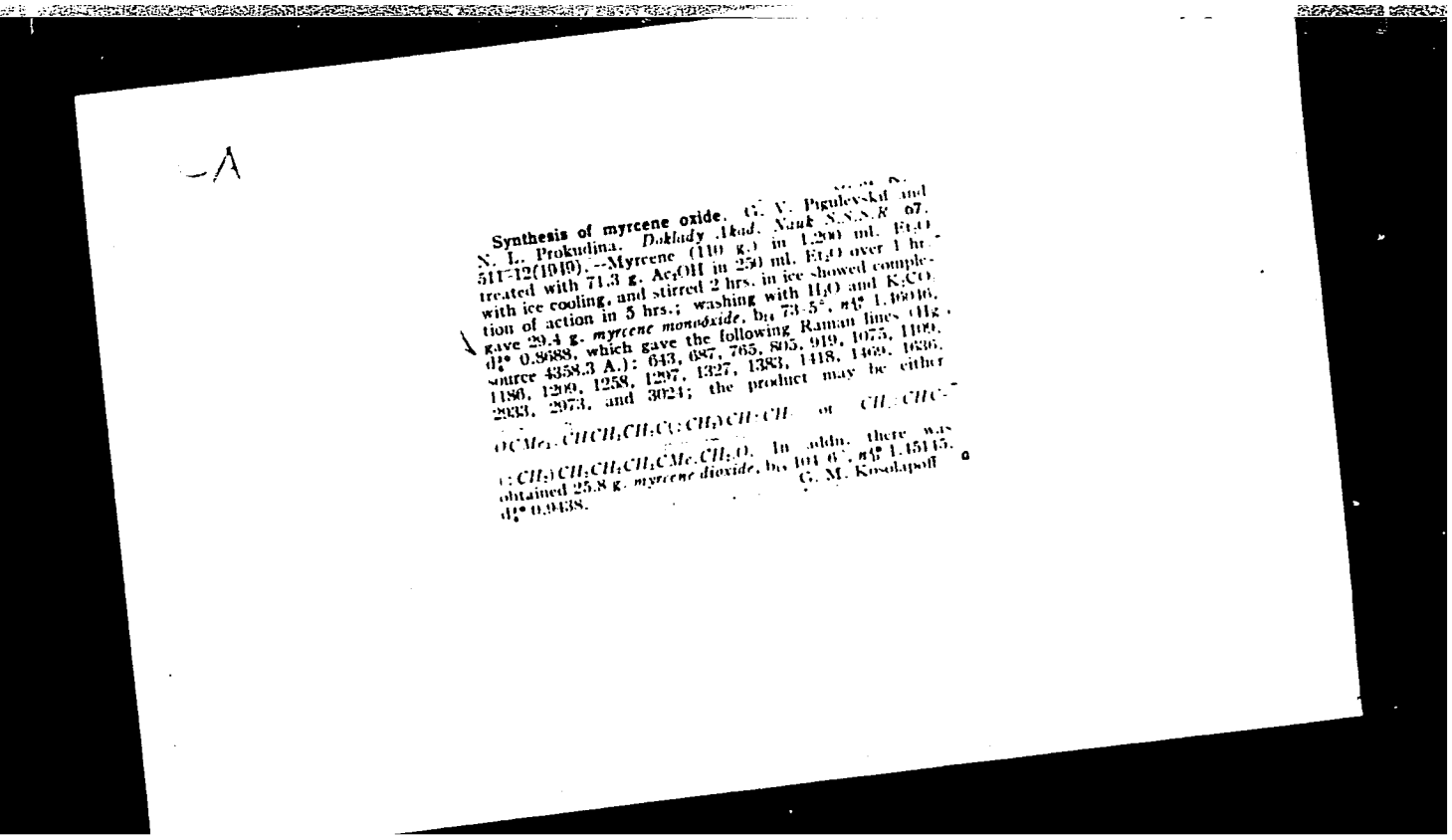
21 Jul 49

"Synthesis of Myrcene Monxide," G. V. Pigulevskiy, N. L. Prokudina, 2 pp

"Dok Ak Nauk SSSR" Vol LXVII, No 3

Conducted investigation to become familiar with a new oxygen derivative of myrcene obtained by oxidizing it with peroxides of benzoyl, acetyl, and peroxide of phthalic acid. Myrcene was initially derived from "linolool," partly by Brooks and Humphrey's method and partly by B. Arbuzov's method. Gives formulas, indicating that second fraction represents myrcene dioxide. Submitted by Acad A. I. Oparin 16 May 49.

Pa. 150T14



A

Synthesis of myrcene oxide. G. V. Pigulevskiĭ and N. L. Prokudina. *Doklady Akad. Nauk S.S.S.R.* 67, 511–12(1949).—Myrcene (110 g.) in 1,200 ml. Et_2O treated with 71.3 g. AcO_2H in 250 ml. Et_2O over 1 hr. with ice cooling, and stirred 2 hrs. in ice showed completion of action in 5 hrs.; washing with H_2O and K_2CO_3 gave 29.4 g. *myrcene monoxide*, b_{11} 73–5°, n_D^{20} 1.4816, d_4^{20} 0.9688, which gave the following Raman lines (Hg source 4358.3 A.): 643, 687, 765, 805, 919, 1075, 1109, 1186, 1209, 1258, 1297, 1327, 1383, 1418, 1469, 1636, 2933, 2973, and 3024; the product may be either $(CH_3)_2C{:}CHCH_2CH_2C(:CH_2)CH{:}CH_2$ or $CH_2{:}CHC(OCMe){:}CHCH_2CH_2C(:CH_2)CH{:}CH_2$. In addn. there was obtained 25.8 g. *myrcene dioxide*, b_{11} 101.6°, n_D^{20} 1.4515, d_4^{20} 0.9438.

G. M. Kosolapoff

CA

Structure of myrcene. G. V. Pigulevskiĭ and N. I. Prokudina. *Doklady Akad. Nauk S.S.S.R.* 67, 283-6 (1949).—Raman analysis of *d*-linalool and the *l*-form

shows double bonds between the secondary-tertiary and primary-secondary C atoms. Conversion of the *d*-form to myrcene according to Brooks and Humphrey (*C.A.* 12, 1613), and Arbuzov and Abramov (*C.A.* 20, 1841), followed by Raman analysis in comparison with natural myrcene, showed that the secondary-tertiary double bond is absent in the linalool-derived product and the frequency is replaced by those of 1657 and 1668 cm.$^{-1}$ the former is observed in products obtained by high-temp. dehydration); since 1657 corresponds to a primary-tertiary double bond it appears that the iodine-catalyzed dehydration leads to *myrcene* of the structure $CH_2:CMe(CH_2)_2C(:CH_2)CH:CH_2$, while the natural product is $Me_2C:CH(CH_2)_2C(:CH_2)CH:CH_2$.

PROKUDINA, R. I.

"Hill Fertilization as an Initial Nourishment Condition for Kok-Saghyz on Peat-Bog Soils." Cand Agr Sci, Inst of Socialized Agriculture, Acad Sci Belorussian SSR, Minsk, 1953. (RZhBiol, No 7, Dec 54)

Survey of Scientific and Technical Dissertations Defended at USSR Higher Educational Institutions (12)
SO: Sum. No. 556, 24 Jun 55

Strengthening of cereal stalks by application of 2 : 4-dichlorophenoxyacetic acid (2 : 4-D). S. M. Mashtakov, S. M. Gol'dina, and R. I. Prokudina (*Doki. Akad. Nauk SSSR*, 1954, 96, 845—848).—Spraying of oat seedlings with 2 : 4-D (1 kg./ha.) causes shortening and strengthening of the stalks, and raises the yield of grain. The effects may be due to better illumination of the growing plants, as a result of suppression of weeds and of formation of narrower and stiffer oat leaves. R. TRUSCOE.

INST. MELIORATION, WATER AND SWAMP CONTROL,
Acad Sci Belo SSR

TISHINA, Ye.N.; PROKUDINA, T.A.; VLASOV, V.A., professor, zaveduyushchiy; KALUGINA, M.N., glavnyy vrach.

Two cases of familial glycogenosis. Pediatriia no.4:71-75 Jl-Ag '53. (MLRA 6:9)

1. Klinika propedevtiki detskikh bolezney pediatricheskogo fakul'teta II Moskovskogo meditsinskogo instituta im. I.V.Stalina na baze Filatovskoy detskoy bol'nitsy (for Vlasov). 2. Filatovskaya detskaya bol'nitsa (for Kalugina). (Liver--Diseases)

PROKUDINA, T. A.

"Comparative Data on the Clinical Symptoms of Dysentery Which are Produced in Children by Soone and Flexner Microorganisms." Cand Med Sci, Second Moscow State Medical Inst imeni I. V. Stalin, Moscow, 1954. (KL, No 3, Jan 55)

Survey of Scientific and Technical Dissertations Defended at USSR Higher Educational Institutions (12)
SO: Sum. No. 556, 24 Jun 55

PROKUDINA, T.A.

Two cases of myxedema in one family. Vop.okh.mat. i det. 1 no.4: 93 Jl-Ag '56. (MLRA 9:9)

1. Iz kafedry gospital'noy pediatrii Voronezhskogo gosudarstvennogo meditsinskogo instituta.
(MYXEDEMA)

SOV/ 49-58-12-12/17

AUTHORS: Mironov, A. V., ~~Prokudina, V. S.~~ and Shefov, N. N.

TITLE: Low Latitudinal Polar Aurora January 21-22, 1957 (Nizkoshirotnoye polyarnoye siyaniye 21-22 Yanvarya 1957 g)

PERIODICAL: Izvestiya akademii nauk SSSR, Seriya geofizicheskaya, 1958, Nr 12, pp 1514-1516 and 1 plate (USSR)

ABSTRACT: A strong magnetic storm took place during the night January 21-22, 1957. A series of observations were made by the Institute of Atmospheric Physics at its station near Moscow. The aurora spread from 15° above the horizon shortly after midnight (Fig.1) to 70° during one hour (Figs.2 and 3). The photographs of the spectrum directed at 25° were taken, which show the lines of oxygen, nitrogen and hydrogen (Figs. 4 and 5). The data are shown in the table on p 1514 in the following order: identification, λ measured, λ theoretical, transition, intensity (spectrum 1 and 2), blended bands and their intensities. The determination of H_α was very complicated due to the interference in the bands 6.3 and 7.4.

Card 1/2

Low Latitudinal Polar Aurora January 21-22, 1957

However, it was possible to establish its velocity as v = ±500 km/sec, and the maximum intensity 28.4. There are 5 figures, 1 table and 4 references; 2 of the references are Soviet and 2 are English.

ASSOCIATION: Akademiya nauk SSSR, institut fiziki atmosfery, Zvenigorodskaya nauchnaya stantsiya (Academy of Sciences, USSR, Institute of Physics of the Atmosphere, Zvenigorod Scientific Station)

SUBMITTED: December 2, 1957.

Card 2/2

22393
S/035/61/000/005/028/042
A001/A101

3,1800

AUTHOR: Prokudina, V.S.

TITLE: On observations of line λ 6562 A in the night sky spectrum

PERIODICAL: Referativnyy zhurnal, Astronomiya i Geodeziya, no. 5, 1961, 64, abstract 5A421 (V sb. "Spektr. elektrofotometr. i radiolokats. issled. polyarn. siyaniy i svecheniya nochn. neba. no. 1", Moscow, AN SSSR, 1959, 43 - 44, Engl. summary)

TEXT: Line λ 6562 appears regularly on spectrograms obtained at the Zvenigorod station. Its intensity is comparable with that of P_1 and P_2 lines of OH (6.1). The line width does not exceed the width of the instrument profile. The appearance of emission is not connected with low-latitude auroras. It is surmised that this is hydrogen emission excited in the upper atmosphere or in the interplanetary space.

O. V.

[Abstracter's note: Complete translation]

Card 1/1

MIRONOV, A.V.; PROKUDINA, V.S.; SHEFOV, N.N.

Low-latitude aurora observed Jan. 21-22, 1957. Izv.AN SSSR.Ser. geofiz. no.12:1514-1516 D '58. (MIRA 12:1)

1. AN SSSR, Institut fiziki atmosfery, Zvenigorodskaya nauchnaya stantsiya.

(Auroras)

84576

S/035/60/000/009/009/016
A001/A001

3,1810

Translation from: Referativnyy zhurnal, Astronomiya i Geodeziya, 1960, No. 9, p. 68, # 9074

AUTHORS: Mironov, A.V., Prokudina, V.S., Shefov, N.N.

TITLE: The Observation of Aurora Polaris on February 10-11, 1958, near Moscow

PERIODICAL: V sb.: Spektr. elektrofotometr. i radiolokats. issled- polyarn. siyaniy i svecheniya nochn. neba, No. 1, Moscow, AN SSSR, 1959, pp. 20-24 (Engl. summary)

TEXT: The authors describe the aurora polaris on February 10-11, 1958, which was characterized by a high brightness and a large glow area, as well as by a brief appearance of a radiative arc in zenith. The aurora polaris was accompanied with a strong magnetic storm. The spectra of this aurora polaris at bands $\lambda\lambda$ 3,400-6,600 (dispersion $\sim$85 A/mm), $\lambda\lambda$8,000-9,400, 9,800-11,200 (dispersion $\sim$150 A/mm) and $\lambda\lambda$ 3,500-6,600 (dispersion $\sim$320 A/mm) were obtained at the Zvenigorod station of the Institut fiziki atmosfery (Institute of Physics of

Card 1/2

84576
S/035/60/000/009/009/016
A001/A001

The Observation of Aurora Polaris on February 10-11, 1958, near Moscow

Atmosphere) of AS USSR. A spectrogram exposed from 19^h35^m to 6^h00^m was cited. Emissions were discovered in the spectrum, characteristic for an intense low-latitude aurora, pertaining to N_2^+, NI, NII, OI, OII. A characteristic feature of this spectrum is the absence of the first and second positive nitrogen systems which are often observed in spectra of high-latitude auroras, and a clear display of atomic lines over the background. Relative intensities of emissions are presented. R, Q and P-branches of the OH-band (5,2) are seen on the spectrogram. In this aurora, the line λ 10,830 (Q-branch) is more intense than the R-branch by 9 times; their ratio exceeds by a factor of 3 the mean ratio between the Q- and R-branches in the night sky glow. It can be concluded from the R-branch of the (5,2) band and from other bands of OH, such as (4,1), (9,5), (6,1), (9,3) and (8,2), that hydroxyl emission in this spectrum is weaker in comparison with other nights. The authors assume that there is an emission in the line λ 10,830, which is connected with the aurora polaris and caused by the emission of HeI (2^3S - 2P transition) from the 20.87-ev level. The profile of emission λ 10,830 is given; its half-width coincides with the instrumental one and is equal to 9 A. There are 9 references.

F.K. Shuyskaya

Translator's note: This is the full translation of the original Russian abstract.

Card 2/2

PROKUDINA, V.S.

OBSERVATION OF LINE λ6562 Å IN THE NIGHT-SKY SPECTRUM

by

V. S. Prokudina

ABSTRACT

Registration of a narrow spectral line at λ6562 Å in the night airglow spectrum is reported.

(Author's English summary)

Spectral, Electrophotometric and Radar Research on Aurorae and Night Airglow edited by V. I. Krasovskiy, Moscow, Izdatel'stvo Akad. Nauk SSSR, 1959.

PROKUDINA, V.S.

THE OBSERVATION OF THE AURORA OF 10-11

FEBRUARY 1958, NEAR MOSCOW

by

A. V. Mironov, V. S. Prokudina and N. M. Shefov

ABSTRACT

The results of treatment of the auroral spectrograms in the regions 8000-9400, 9600-11200 Å obtained on 10-11 February 1958 at the Zvenigorod station are reported.

Strong enhancement of the emission at λ10830 Å is registered as compared to the usual intensity of the Q-branch of the OH (5,2) band. This enhancement is apparently due to the appearance of the He I emission.

Spectral, Electrophotometric and Radar Research on Aurorae and Night Airglow, edited by V. I. Krasovsky, Moscow, Izdatel'stvo Akad. Nauk SSSR, 1959.

89766

S/169/61/000/002/020/039
A005/A001

3,1800 (1062,1078 only)
3,1810

Translation from: Referativnyy zhurnal, Geofizika, 1961, No. 2, p. 34, # 2G254

AUTHOR: Prokudina, V. S.

TITLE: Certain Peculiarities in the Spectra of the Night Sky Glow and the Low-Latitude Aurora

PERIODICAL: V sb.: "Spektr., elektrofotometr. i radiolokats. issled. polyarn. siyaniy i svecheniya nochnogo neba". No. 2-3, Moscow, AN SSSR, 1960, pp. 68-70

TEXT: Spectra obtained with the spectrograph СП-48 (SP-48) in the range λ 5,500 - 6,600 Å were used for the comparison of the emissions of the night sky glow and the low-latitude aurora. The spectrographs were directed northwards at an angle of 30° to the horizon. The calibration was performed with the aid of a phosphor and a standard lamp. The transmittance of the atmosphere was taken into account by visual evaluation. The spectra obtained in 1957 and 1958 were processed. The emission intensities were determined of P_2OH (9,3) λ 6,330 Å, [OI] λ 6,364 Å, Na λ 5,890 Å, [OI] λ 5,577 Å. The auroral spectra contain also emissions N_2^+ λ 3,914 Å and [NI] 5,200 Å. The results of the comparison of the spectra showed

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89766

S/169/61/000/002/020/039
A005/A001

Certain Peculiarities in the Spectra of the Night Sky Glow and the Low-Latitude Aurora

that a correlation is observed between the emissions of OH, Na, and [OI] λ 6,364Å in absence of aurora. At the same time, no clear correlation between these emissions and 5,577 Å is present. Characteristic forms of auroras observed at 51° in latitude are: red spots, diffuse and radiant formations changing in brightness and duration. Homogeneous and radiant arcs were seldom observed. When auroras were existent, the spectrographs were directed to the red spots.

L. Ye.

Translator's note: This is the full translation of the original Russian abstract.

Card 2/2

PROKUDINA, V.S.

S/169/60/000/005/003/003
A005/A001

Translation from: Referativnyy zhurnal, Geofizika, 1960, No. 5, p. 184, # 5492

AUTHORS: Mironov, A.V., Prokudina, V.S., Shefov, N.N.

TITLE: An Observation of Polar Light on February 10-11, 1958, Near Moscow

PERIODICAL: V. sb.: Spektr. elektrofotometr. i radiolokats. issled. polyarn. siyaniy i svecheniya nocnn. neba, No. 1, Moscow, AN SSSR, 1959, pp. 20-24 (Engl. summ.)

TEXT: The authors describe the polar light, which was observed in the region of Zvenigorod. The spectra of the light are presented pertaining to the spectral ranges: λ = 3,400-6,600; 8,000-9,400; 9,800-11,200 Å. The identification of the lines and the estimation of their intensity are given. Emissions were detected, which pertain to N_2^+, NI, NII, OI, and OII. It is assumed that the intensification of the line λ = 10,830 Å is connected with HeI-emission (transition 2^3 S - 2^3 P). There are 9 references.

Card 1/1

MIRONOV, A.V.; PROKUDINA, V.S.; SHEFOV, N.N.

Observations of the aurora borealis of February 10-11, 1958, in Moscow. Spekt.,elektrofot. i radiolok.issl.pol.siian. i svech.noch.neba. no.1:20-24 '59. (MIRA 12:8)
(Auroras)

PROKUDINA, V.S.

Observation of the line λ 6562 Å in the night-airglow spectrum.
Spekt.,elektrofot. i radiolok.issl.pol.sian. i svech.noch.neba.
no.1:43-44 '59. (MIRA 12:8)
(Night sky--Spectra)

INFORMATION REPORT [redacted] INFORMATION REPORT

Spectral, Electrophotometrical and Radar Researches of Aurorae and Airglow.

published by the Soviet National IGY Committee, June 1959

[redacted] and committee. Apparently this is the first of a series to be published on Section IV of the IGY program (Aurorae and Airglow). The publication includes the following articles:

"Hydrogen Emission and Two Types of Auroral Spectra," by GI Galperin.

"Auroral Observations on 10-11 Feb 58, Moscow," by AV Mironov, VS Prokudina, and NN Shefov.

"Intensities of Some Twilight and Night Airglow Emissions," by NN Shefov.

"Electrophotometrical Measurements in the Auroral Zone," by NV Jorjio. N.V. DZHORDZHIO

"An Attempt of Interferometrical Study of Auroral Emission Lines," by TM Mularchik. MULYARCHIK, T.M.

"Observations of the Line 6562 A in the Night Airglow Spectrum," by VS Prokudina.

"Some Results of Investigations of Auroral and Night Airglow Spectra," by [illegible] F.K. SHUYSKAYA

UNCLASSIFIED.

PROKUDINA, V.S.

33-3-16/32

AUTHOR: Mironov, A.V. and Prokudina, V.S.

TITLE: The identification of the emission of the night sky at about 5 300 Å. (Ob otozhdestvlenii emissii nochnogo neba okolo 5 300 Å)

PERIODICAL: "Astronomicheskiy Zhurnal" (Journal of Astronomy), 1957, pp. 440 - 441, Vol.34, No.3, (U.S.S.R.)

ABSTRACT: Koomen et al. (1) have shown that the emission near 5 300 Å originates at a height of 80 to 150 km, with a maximum intensity at about 100 km. Earlier, Hunaerts and Nicolet (2) suggested that bands 6 - 0 and 9 - 2 of hydroxyl in the ground state should occur near 5 300 Å. Two possible mechanisms of excitation of hydroxyl bands are known:

$$O_3 + H \rightarrow OH + O_2$$ (Bates et al. (3),(4).)

$$O_2 + H \rightarrow OH + O$$ (Krasovskiy, (5).)

The first of these cannot be effective above 80 km, whilst the second should have a maximum at about 100 km. It would therefore appear that Koomen's results support the second alternative.

Observations carried out by the present authors in favourable atmospheric conditions support the hypothesis that the

Card 1/2

The identification of the emission of the night sky at about 5 300 Å. (Cont.) 33-3-16/32

emission at 5 300 Å belongs to the oscillation spectrum of hydroxyl in the ground state.

Acknowledgement is expressed to V.I. Krasovskiy for his comments.

There are 1 table and 5 references, 1 of which is Slavic.

ASSOCIATION: Zvenigorod Scientific Station of the Institute of Physics of the Atmosphere Ac.Sc., U.S.S.R. (Zvenigorodskaya Nauchnaya Stantsiya Instituta Fiziki Atmosfery AN SSSR)

SUBMITTED: September 8, 1956.

AVAILABLE: Library of Congress

Card 2/2

SOV/49-59-4-17/20

AUTHOR: Prokudina, V. S.

TITLE: The Determination of the "Rotational" Temperature of the Hydroxyl in the Upper Atmosphere (Opredeleniye "vrashchatel'noy" temperatury gidroksila v verkhney atmosfere)

PERIODICAL: Izvestiya Akademii nauk SSSR, Seriya geofizicheskaya, 1959, Nr 4, pp 629-631 and 1 plate (USSR)

ABSTRACT: The temperature was determined from the spectrum of hydroxyl OH for which the vibration-rotation bands were measured through the night-glow of the sky. Part of these bands (5900-6600 Å and 8300-9100 Å, Figs 1 and 2) were used for the temperature determination. The spectra were obtained from the spectrographs directed North at 30° to the horizon exposed for 10 to 12 hours. The wavelengths of the red region are shown in Tables 1 and 2. The method of temperature determination was based on the assumption that the rational band is related to the temperature as expressed in the formula:

$$I_{em} = \text{const } i(J')e^{-\frac{W}{kT}},$$

Thus the temperature can be found from the formula:

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The Determination of the "Rotational" Temperature of the Hydroxyl in the Upper Atmosphere

$$T = -\frac{B_{v'}}{k}\frac{1}{\operatorname{tg}\varphi} \quad {}^{o}K \quad .$$

The graphs of temperature for various bands are illustrated in Fig 3, which gives the "rotational" temperature for the band 9.3 as equal to $T = 240 \pm 20^{o}K$. The results of experiments are tabulated in Table 3. Thanks are expressed to V. I. Krasovskiy. There are 3 figures, 3 tables and 4 references, of which 1 is Soviet and 3 English.

ASSOCIATION: Akademiya nauk SSSR, Institut fiziki atmosfery (Academy of Sciences USSR, Institute of Physics of the Atmosphere)

SUBMITTED: January 8, 1958.

L 20965-66 EWT(1)/FCC/EWA(h) GW

ACCESSION NR: AP5026054 UR/0293/65/003/005/0737/0750
523.72:629.192.2:550.3

AUTHOR: Mandel'shtam, S. L.; Prokudina, V. S.; Tindo, I. P.; Fetisov, Ye. P.

TITLE: On the x-radiation of the quiet sun

SOURCE: Kosmicheskiye issledovaniya, v. 3, no. 5, 1965, 737-750

TOPIC TAGS: sun, solar emission, quiet sun, solar x radiation, solar physics, solar activity, disturbed sun

ABSTRACT: The results of computations of the thermal x-radiation of the sun in the wavelength region shorter than 20 Å are examined, and the computed values of radiation fluxes compared with experimental data. To obtain a "volumetric measure of the emission" of the various regions of the corona that enter into the computational data, experimental values based on radiospectroheliograms at a wavelength of 9.1 cm are used. The temperature of the undisturbed corona is taken as $\sim 1 \cdot 10^6$ K, while for regions having an increased measure of emission temperature, values lying within the limits of $1.5—2.5 \cdot 10^6$ K are assigned. Computational and experimental values of x-ray flux are in good agreement for different levels of solar activity, sugessting that the solar x-radiation in the region $\lambda < 20$ Å is of a thermal nature. It is composed of the virtually constant component emitted

Card 1/2

L 20965-66
ACCESSION NR: AP5026054

from undisturbed coronal regions to which the slowly changing component, corresponding to "hotter" radiation from active coronal regions, is superimposed. This latter component changes greatly depending on the number and size of the active regions. It is noted that while both the active and quiet regions make comparable contributions in the decimeter radio range, the contributions of the quiet regions are negligible in the x-ray region at $\lambda < 20$ Å. Therefore, no proportionality can be expected between the total flux of radio and x-radiation. To verify these findings, it is planned to scan the solar disk in two spectral ranges, viz, 2—10 and 8—18 Å. This will make it possible to determine T_e and N_e simultaneously but independently, and to compile a chart showing the distribution of N_e and T_e over the solar disk. Orig. art. has: 3 figures, 7 tables, and 7 formulas. [DM]

ASSOCIATION: none

SUBMITTED: 16May64 ENCL: 00 SUB CODE: AA

NO REF SOV: 011 OTHER: 014 ATD PRESS: 4116

Card 2/2 MJS

PROKUDINA, Ye. A. and SEMENOV, L. P.

"The Prophylaxis of Radiation Sickness in the Experiment." a report presented at the Transcaucasian Radiological Conference, Tbilisi, 28-31 Oct 55.

Sum. No. 1047, 31 Aug 56

PROKUDINA, Ye.

USSR/Human and Animal Physiology - Effect of Physical Factors. V-15

Abs Jour : Ref Zhur - Biol., No 1, 1958, 4562

Author : L. Syemyenov, Ye. Prokudina

Inst : -

Title : Experimental Prophylaxis of Radiation Sickness

Orig Pub : Tr. 1-oy Zakavkazsk. konferentsii po med. radiol. Tbilisi, Gruzmedgiz, 1956, 12-17

Abstract : Animals were subjected to general irradiation - 600-900 r. Administration of regulators of the central nervous system (CNS) - bromide, caffeine, or combinations of both - and of excitants of the type of cardiamine (in doses not inducing a convulsion state) did not change the course of the radiation sickness. The application of an ether-barbamyl narcosis during irradiation did not remove the main manifestations of radiation sickness, but hastened the restoration of the disturbed functions and decreased mortality by 18% with 100% mortality

Card 1/3

Abs Jour : Ref Zhur - Biol., No 1, 1958, 4562

among controls. Hemopoietic organs were back to normal from 7 to 10 days earlier than in controls, leukocytes reappeared earlier in peripheral blood, gastro-intestinal disorders were less pronounced. A second narcosis, or a prolonged therapeutical sleep did not have any protective effect. Negative results were obtained when urethane was used: it produced disorders resembling those of radiation sickness. Among substances having an effect on the CNS, effective were those which produced inhibition in the centers at the time of irradiation. Substances which paralyzed peripheral nerve endings or nerve ganglia did not have an effect on the course of radiation sickness. Substances which excited peripheral nervous endings had a protective effect (adrenalin - survival of 8%, acetylcholine - survival of 9%, histamin - survival of 4%). A combination of adrenalin with acetylcholine produced a survival of 31%, and a survival of

USSR/Human and Animal Physiology - Effect of Physical Factors. V-15

Abs Jour : Ref Zhur - Biol., No 1, 1958, 4562

100% in less severe cases of radiation sickness. Administration of adrenalin with acetylcholine 5 minutes after irradiation, or a 2nd administration during the acute phase of radiation sickness did not have any protective effect. Of all tested sulphur-containing substances had a protective action those whose structure resembled that of adrenalin or acetylcholine (presence of an ethylamine group). In combinations of adrenalin with acetylcholine, any of the two substances may be replaced by a sulphur-containing substance of the mentioned type.

Card 3/3

SEMENOV, L.F.; PROKUDINA, Ye.A.

Use of compounds containing sulfur in the prevention of radiation sickness. Med.rad. 1 no.4:70-75 Jl-Ag '56. (MLRA 9:12)

1. Iz otdela eksperimental'noy terapii TSentral'nogo rentgeno-radiologicheskogo nauchno-issledovatel'skogo instituta (dir. - prof. M.N.Pobedinskiy) Ministerstva zdravookhraneniya SSSR.

(RADIATION SICKNESS, prev. and control
sulfur-containing cpds.)
(SULFUR, ther. use
sulfur-containing cpds. in prev. of radiation sickness)

PROKUDINA, YE. A.

"Change in Adenosinetriphosphatase Activity in the Development of the Acute and Subacute Forms of Radiation Sickness," by Ye. A. Prokudina, Division of Experimental Therapy (head, T. M. Kondrat'yeva), Central Scientific Research Roentgeno-Radiological Institute, Ministry of Health USSR, Meditsinskaya Radiologiya, Vol 1, No 6, Nov/Dec 56, pp 46-51

Changes in adenosinetriphosphatase activity during the development of radiation sickness in white mice was studied.

In the first series of experiments the dynamics of the above change in the development of the acute form of radiation sickness (1,000 r) was studied. The earliest increase (at the end of one hour) in enzyme activity was noted in the spleen (130% on the average). At the end of 24 hours the adenosinetriphosphatase activity increases up to 315% in the spleen, 218% in the thymus, and 171% in the lymph nodes. Maximum activity is attained at the end of 48 hours (350, 370, and 180%, respectively).

In the second series of experiments the change of adenosinetriphosphatase activity in the subacute form of radiation sickness (300 r) was studied. Increased activity occurs in the same organs, but is not as marked and is less constant than in the acute stage. (U)

SUM. 1322

SEMENOV, L.F.; PROKUDINA, Ye.A.

Experimental data on the prophylaxis and therapy of radiation sickness. Vop.radiobiol. 2:394-401 '57. (MIRA 12:6)

1. Sotrudniki TSentral'nogo nauchno-issledovatel'skogo rentgeno-radiologicheskogo instituta Ministerstva zdravookhraneniya SSSR.
(RADIATION SICKNESS) (PHARMACOLOGY)

PROKUDINA, Ye.A.

SEMENOV, L.F.; PROKUDINA, Ye.A.

Combination of adrenalin and acetylcholine in the prevention of radiation sickness. Med.rad. 2 no.3:35-40 My-Je '57. (MLRA 10:10)

1. Iz Tsentral'nogo nauchno-issledovatel'skogo rentgeno-radiologicheskogo instituta Ministerstva zdravookhraneniya SSSR.

(RADIATION PROTECTION, exper.
acetylcholine & epinephrine in mice)
(ACETYLCHOLINE, eff.
in radiation protection of mice)
(EPINEPHRINE, eff.
same)

PAGNUDINA, Ye. A., Cand Biol Sci --(diss)"Study of adenosinetriphosphatase activity in the organs of irradiated animals." Len, 1959. 16 pp (Central Scientific Research Inst of Med Radiology of the Min of Health USSR), 100 copies (KL,30-59, 119)

PROKUDINA, Ya. . .

Remote functional state of the adrenal glands fi[illegible]
irradiation. Radiobiologiia 4 no.3:409-413 '64.

1. TSentral'nyy nauchno-issledovatel'skiy institut [illegible]
radiobiologii, Leningrad.

PROKUDINA, Ye.

Pathogenesis of the increased adenosinotriphosphatase activity of the spleen following irradiation of the head in rats. Med. rad. 4 no.6:47-51 Je '59. (MIRA 12:8)

1. Iz eksperimental'no-rakovogo otdela (zav. S.N.Aleksandrov) TSentral'nogo nauchno-issledovatel'skogo instituta meditsinskoy radiologii.

(ADENYLPYROPHOSPHATASE,
in spleen, eff. of x-irradiation of head in rats (Rus))
(SPLEEN, metab.
ATPase, eff. of x-irradiation of head in rats (Rus))
(ROENTGEN RAYS, eff.
eff. of irradiation of head on spleen ATPase in rats (Rus))
(HEAD, eff. of radiations,
x-ray irradiation of head in rats on spleen ATPase (Rus))

DUMOVA, A.M.; PROKUDINA, Ye.A.

Effect of tetracycline on the content of hydrocortisone in the blood in guinea pigs. Antibiotiki 10 no.9:842-845 S '65.
(MIRA 18:9)

1. Laboratoriya farmakologii (zav. - A.V.Loginov) Leningradskogo nauchno-issledovatel'skogo instituta antibiotikov i laboratoriya otdalennoy luchevoy patologii (zav. - prof. S.N.Aleksandrov) TSentral'nogo nauchno-issledovatel'skogo rentgeno-radiologicheskogo instituta Ministerstva zdravookhraneniya SSSR.

PROKUDINA, YE.I.

Epilepsy

Nursing of epileptics treated by Dr. Karmanova's method. Med.sestra, no. 10, 1952.

MONTHLY LIST OF RUSSIAN ACCESSIONS, LIBRARY OF CONGRESS, DECEMBER 1952. UNCLASSIFIED.

PROKULEWICZ, S.

HOFFMAN, B.;BENTKOWSKI, Z.;POFELIS, R;PROKULEWICZ, S.

Further study on isoantagonists of Escherichia coli and its significance in infantile diarrhea. Pediat. polska 26 no. 10: 1116-1126 Oct. 1951. (CLML 21:3)

1. Of the First Pediatric Clinic (Head--Prof. H. Hirszfeldowa, M. D.) of Wroclaw Medical Academy and of the National Institute of Hygiene Branch in Wroclaw. (Head--Eng. I.Szczepanski, M. D.).

PROKUNIN, L.M.; SHEMBEL', B.K.

Equivalent circuit and parameters of a cylindrical toroidal cavity resonator. Radiotekh. i elektron. 3 no.9:1212-1216 S '58.
(Electric resonators) (MIRA 11:10)

20696
S/120/61/000/001/034/062
E192/E382

9, 2310 (also 2604, 1130)

AUTHORS: Prokunin, L.M. and Shembel', B.K.

TITLE: Electric-field Distribution Along the Axis of a Toroidal Resonator

PERIODICAL: Pribory i tekhnika eksperimenta, 1961, No. 1, pp. 109 - 111

TEXT: A cylindrical toroidal resonator (Fig. 1) has many applications in radio engineering, and in practice it is necessary to know the distribution of the electric field along its axis. The calculation of the field is difficult and it is necessary to resort to measurements. In the following, a method of measurement based on detuning is described. The method is based on the relationship:

$$\Delta f / f = - (1/2) \Delta W/W \qquad (1)$$

which relates the deviation of the natural oscillation frequency of the resonator to the changes of the energy stored in the system. In the measurement of the field along the axis,

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it is possible to deform the field by means of a small dielectric sphere. Eq. (1) can then be written as (Ref. 7):

$$\frac{\Delta f}{f} = \frac{v}{V} \frac{\varepsilon - 1}{\varepsilon + 2} \frac{E_o^2}{\overline{E^2}} \qquad (2)$$

where v is the colume of the sphere,
V is the volume of the resonator,
E_o is the field at the point of measurement,
$\overline{E^2}$ is the mean square electric field over the resonator.

The resonator is excited by a suitable input loop for the measurements and its frequency deviation is determined indirectly by means of a crystal rectifier circuit. The frequency deviation is given by:

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$$\Delta f = (f/2Q)\sqrt{(I_p/I)^2 - 1} \quad \text{for } \Delta f/f \ll 1$$

where I_p is the detector current at the resonant frequency,
I is the current at a given deviation, and
Q is the quality factor of the resonator.

The perturbing sphere has a diameter of 2 mm and is made of paraffin; it is suspended on a fine filament having a diameter of 1-3 μ. The detector could be used to determine the relative frequency displacement of the resonator by taking the resonance curves for various positions of the sphere. It was then possible to calculate the field. In this way, the fields were determined for various parameters h, ℓ, b and d of the resonator (Fig. 1). The external diameter of the resonator was D = 360 mm and the inner diameter of the internal tube was d_o = 10 mm. The potential difference along the resonator axis was also measured. In this case, the resonator was fitted with an additional probe. A series of

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normalised curves corresponding to d = 30 mm is shown in Fig. 3; U in the figure denotes the potential difference between the ends of the resonator and h is its height. The other parameters for the curves of Fig. 3 are indicated in the table:

Curve	h/b	2 h, mm	Curve	h/b	2 h, mm
1	9	45	5	4.7	102
2	7.7	58	6	4.0	120
3	6.3	71	7	3.4	141
4	5.4	86	8	3.0	165 .

The field distribution in the resonator was also checked by means of an electrolytic tank and it was found that the curves thus obtained were in good agreement with those of Fig. 3. All the above experiments are valid only if the following conditions are fulfilled: $d/D \leq 0.1$ and $h/b > 4$. There are 5 figures, 2 tables and 12 references: 2 Soviet and 10 non-Soviet.

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SUBMITTED: February 11, 1960

Fig. 1:

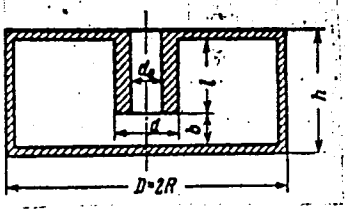
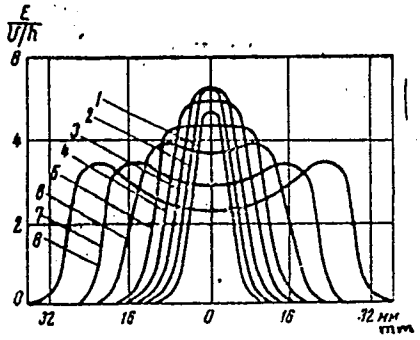


Fig. 3:



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PROKUNIN, L.M.

Equivalency of frequency radiation patterns originating during the motion of antennas with switching of the array elements. Radiotekh. i elektron. 10 no.2:360-362 F '65.

(MIRA 18:3)

AUTHORS: Prokunin, L. M., Shembel', B. K.

TITLE: The Equivalent Circuit and the Parameters of a Cylindrical Toroidal Resonator (Skhema zameshcheniya i parametry tsilindricheskogo toroidal'nogo rezonatora)

PERIODICAL: Radiotekhnika i elektronika, 1958, Vol 3, Nr 9, pp 1212-1216 (USSR)

ABSTRACT: The complex resonator, such as shown in Fig.1 (p 1213) can be represented by an equivalent parallel circuit or a series circuit. However, the calculation of the equivalent parameters presents a number of practical difficulties, since the mathematics is very involved. The problem of determining the equivalent parameters was solved by the author in the following manner. First, a simple, regular resonator is considered; the parameters of this can easily be calculated. The resonator is then "deformed" in the required manner and this results in the change of its resonant wavelength (detuning). Provided the detuning is less than 25%, the parameters of the equivalent circuit can be determined with an accuracy of ± 5% from the graph of Fig.3. These give the values of the correction coefficients K. The parameters of the

The Equivalent Circuit and the Parameters of a Cylindrical Toroidal Resonator

resonator are now found by calculating the parameters of the original simple resonator and by multiplying these by appropriate correction factors (see Fig.4). The paper contains 4 figures and 7 references; 6 of the references are Soviet (1 is translated from English) and 1 is English.

SUBMITTED: February 26, 1957.

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E032/E314

Q6.2330

AUTHOR: Prokunin, L.M.

TITLE: A Method for the Determination of the "Efficiency" of Accelerating Gaps

PERIODICAL: Pribory i tekhnika eksperimenta, 1960, No. 6, pp. 20 - 22

TEXT: The result of an interaction between a particle and a high-frequency field depends both on the magnitude of the associated potential difference and the specific field distribution along the path of the particle. This distribution may be very complex and is therefore normally not calculated theoretically. It is usually determined by empirical methods. A useful quantity which can be used in such analyses is the "efficiency" of an accelerating gap which is defined by

$$\eta = \left(\int_{-L/2}^{L/2} E(z) \cdot \cos \omega_0 t \cdot dz \right) / U$$

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where L is the length over which the field E(z) is acting and $\mathcal{V}$ is the potential difference in the gap. The quantity $\mathcal{V}$ is frequently called the "flight-time factor". In the analysis given in the present paper it is assumed that the instantaneous field distribution may be described by the Laplace equation. Direct measurements can then be replaced by electrolytic trough measurements, using suitably chosen electrodes. Once the potential distribution is determined, the efficiency can be computed. In the case of axially symmetric systems the efficiency along a given straight line can be computed if it is parallel to the axis and the efficiency for any other similar line is known. The conversion of the efficiency from one radius to another can be carried out with the aid of a simple conversion coefficient $I_o(kr)$. It follows that the potential distribution in the accelerating gap need only be determined for any one of the above straight

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lines. Thus, in using a wedge-shaped trough it is best to determine the potential diagram at a distance from the axis which is such that surface effects and other contributing errors are minimised. Sometimes the choice of the radius depends also on the method used to analyse the measurements. In the present paper, the author describes a method whereby the efficiency can be determined directly from the potential diagram. In order to do this the formula for $\mathcal{V}$ is transformed in the following way. Since the time coordinate can be replaced by the z coordinate it follows that the term $\cos \omega_o t$ can be replaced by $\cos\left[(2\pi kz/2L)+\varphi\right]$. The phase φ is of little significance since it simply enters the expression for $\mathcal{V}$ in a multiplying factor $\left[\mathcal{V} = \mathcal{V}(0)\cos\varphi\right]$ and hence it may be put equal to zero. The replacement of $\cos \omega_o t$ by the k-th harmonic (where $k = 1, 3, 5, \ldots$] depends on the choice of the period along the z axis $(2L)^{-1}$ and the relation between

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the field $E(z)$, the frequency ω_o and the velocity of the particle. The analysis is then continued by expanding the field $E(z)$ so that

$$E_3 = (\pi/2)L\{(U - 2\sigma_2)_2 - 1/3E_3 - 1/5\ E_{15} - 1/7\ E_{21} - \ldots\} \quad .$$

Thus in order to determine the efficiency η one must calculate the k-th harmonic. This can be done quite simply in the present case since the potential diagram is available (from experimental data) and hence the harmonics in the above expansion can be evaluated graphically. Formulae are derived in the present paper which can be used in these computations

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and are then applied to two special cases which are of importance in practice. It is claimed that the method increases the accuracy of the efficiency and the calculations involved are less laborious than in other methods. There are 2 figures, 2 tables and 2 Soviet references.

SUBMITTED: November 16, 1959

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PROKUNIN, L.M.; SHEMBEL', B.K.

Distribution of an electric field along the axis of a toroidal resonator. Prib. i tekh. eksp. 6 no.1:109-111 Ja-F '61. (MIRA 14:9)

(Resonators) (Electric fields)

L 31292-65 EWT(1)/EEC(t)/EEC-4/EEC(b)-2/FCS(k) Pac-4/Pae-2/P1-4/P3-4/P1-4
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ACCESSION NR: AP5005352 S/0109/65/010/002/0360/0362

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B

AUTHOR: Prokunin, L. M. 15

TITLE: Equivalence of the frequency directional patterns occurring during antenna travel and on switching of the elements in an array

SOURCE: Radiotekhnika i elektronika, v. 10, no. 2, 1965, 360-362

TOPIC TAGS: antenna, antenna array, directional pattern

ABSTRACT: Two antenna systems with time-varying parameters are compared: (1) a slightly-directional antenna moving in space as considered by P. G. Hansel (Proc. IRE, 1953, 41, 12, 1750) and (2) an antenna array whose elements are switched as considered by R. E. Anderson (Proc. NEC, 1955, 11, 738). The equivalence of the two systems is considered when the length of travel of the first antenna is equal to the total length of switchable elements of the second. It is found that if the spectral functions of both antennas coincide, their frequency

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patterns will coincide, too, provided v = d/T, where v is the speed of the first-antenna travel, d is the spacing and T is the period of switching of the second-antenna elements. The differences between both patterns are also indicated. Orig. art. has: 1 figure and 11 formulas.

ASSOCIATION: none

SUBMITTED: 29Dec63 ENCL: 00 SUB CODE: EC

NO REF SOV: 000 OTHER: 003

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PROKUNIN, M.S.

29663

Novyyg Elektronnyye

Ryelye Napryazhyeika. Vyestinik

Elyektropromsti, 1949, No. 8 s. 17-18

SO: LETOPIS' NO. 40

PROKUPEK, I.; YANIK, A.

Factors influencing decisions in forensic psychiatry. Zhur. nevr. i psikh. 65 no.10:1561-1564 '65. (MIRA 18:10)

1. Kafedra psikhiatrii (zaveduyushchiy - dotsent I.Prokupek) Instituta usovershenstvovaniya vrachey, Praga.

PROKUPEK, I. (Praga)

Problems of the International Statistical Classification (MSK) of Mental Disorders. Zhur.nevr.i psikh. 62 no.8:1231-1234 Ag '62. (MIRA 15:12)

(MENTAL ILLNESS--CLASSIFICATION)

PROKUPEK, Josef

50th year anniversary of Dr. Evzen Vencovsky. Cas. lek. cesk. 97 no.22: 703 30 May 58.
(BIOGRAPHIES
Vencovsky, Evzen (Cz))

PROKUPEK, Josef, Mudr.

Considerations on the fulfilment of tasks in psychiatric care. Cesk. zdravot. 7 no.10:618-623 N '59

1. Prednosta katedry psychiatrie Ustavu pro doskolovani lekaru v Praze.

(PSYCHIATRY)